Exhibit 13

Pace Test Results, Little Belews Creek Sample December 9, 2016



January 11, 2017

Program Manager Duke Energy 13339 Hagers Ferry Road Bldg. 7405 MG3OA2 Huntersville, NC 28078

RE: Project: BELEWS J16090796 Pace Project No.: 92322876

Dear Program Manager:

Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Herring

Kein Slern

kevin.herring@pacelabs.com

HORIZON Database Administrator

Enclosures

cc: Francisco Benzoni

Myra Blake Sean DeNeale

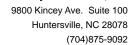
Leslie Griffith Patrick Hunter Nash Long

Program Manager, Duke Energy

Melissa Romanzo Brent Rosser **Nick Torrey**



REPORT OF LABORATORY ANALYSIS





CERTIFICATIONS

Project: BELEWS J16090796

Pace Project No.: 92322876

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

Alaska Certification UST-107 525 N 8th Street, Salina, KS 67401 A2LA Certification #: 2926.01 Alaska Certification #: UST-078 Alaska Certification #MN00064 Alabama Certification #40770 Arizona Certification #: AZ-0014 Arkansas Certification #: 88-0680 California Certification #: 01155CA

Colorado Certification #Pace Connecticut Certification #: PH-0256 EPA Region 8 Certification #: 8TMS-L Florida/NELAP Certification #: E87605

Guam Certification #:14-008r Georgia Certification #: 959 Georgia EPD #: Pace

Idaho Certification #: MN00064 Hawaii Certification #MN00064 Illinois Certification #: 200011 Indiana Certification#C-MN-01 Iowa Certification #: 368 Kansas Certification #: E-10167

Kentucky Dept of Envi. Protection - DW #90062 Kentucky Dept of Envi. Protection - WW #:90062

Louisiana DEQ Certification #: 3086 Louisiana DHH #: LA140001 Maine Certification #: 2013011 Maryland Certification #: 322

Nebraska Certification #: Pace New Jersey Certification #: MN-002 New York Certification #: 11647 North Carolina Certification #: 530 North Carolina State Public Health #: 27700

Michigan DEPH Certification #: 9909 Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT0092

Nevada Certification #: MN 00064

North Dakota Certification #: R-036

Ohio EPA #: 4150

Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Certification #: MN200001 Oregon Certification #: MN300001 Pennsylvania Certification #: 68-00563

Puerto Rico Certification Saipan (CNMI) #:MP0003 South Carolina #:74003001 Texas Certification #: T104704192 Tennessee Certification #: 02818 Utah Certification #: MN000642013-4 Virginia DGS Certification #: 251 Virginia/VELAP Certification #: Pace Washington Certification #: C486 West Virginia Certification #: 382 West Virginia DHHR #:9952C Wisconsin Certification #: 999407970

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174

Alabama Certification #: 41320 Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079 Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Louisiana Certification #: FL NELAC Reciprocity Louisiana Environmental Certificate #: 05007

Maryland Certification: #346 Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236 Montana Certification #: Cert 0074 Nebraska Certification: NE-OS-28-14 Nevada Certification: FL NELAC Reciprocity

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

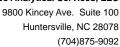
North Carolina Certification #: 12710 Oklahoma Certification #: D9947 Pennsylvania Certification #: 68-00547 Puerto Rico Certification #: FL01264 South Carolina Certification: #96042001 Tennessee Certification #: TN02974 Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity Virginia Environmental Certification #: 460165 Wyoming Certification: FL NELAC Reciprocity

West Virginia Certification #: 9962C Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS





CERTIFICATIONS

Project: BELEWS J16090796

Pace Project No.: 92322876

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804 Florida/NELAP Certification #: E87648 Massachusetts Certification #: M-NC030

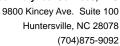
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40 South Carolina Certification #: 99030001 Virginia/VELAP Certification #: 460222

Greenwood Certification IDs

816 Durst Avenue East, Greenwood, SC 29649 South Carolina Laboratory ID #: 24562 North Carolina Divison of Water Resources Certification number 25 Florida Certification number E87633 Virginia VELAP ID: 460250 Asbestos NVLAP accreditation: 101410-0

REPORT OF LABORATORY ANALYSIS





SAMPLE SUMMARY

Project: BELEWS J16090796

Pace Project No.: 92322876

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92322876001	NORTH OF S-10+11	Water	12/09/16 14:30	12/12/16 08:00
92322876002	EB-JJZ-1	Water	12/09/16 15:30	12/12/16 08:00
92322876003	NORTH OF S-10 + 11 BLANK	Water	12/09/16 14:30	12/12/16 08:00
92322876004	EB-JJZ-1 BLANK	Water	12/09/16 15:30	12/12/16 08:00

REPORT OF LABORATORY ANALYSIS



SAMPLE ANALYTE COUNT

Project: BELEWS J16090796

Pace Project No.: 92322876

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92322876001	NORTH OF S-10+11	RSK 175	DR1	1	PASI-M
		EPA 300.0	CDC	3	PASI-W
		EPA 200.7	SH1	7	PASI-A
		EPA 200.7	SH1	11	PASI-A
		EPA 200.7	JMW	4	PASI-A
		EPA 200.8 Rev 5.4	CDF	13	PASI-A
		EPA 200.8 Rev 5.4	CDF	13	PASI-A
		EPA 1631E	ANB	1	PASI-A
		SM 2320B	KDF	3	PASI-A
		SM 2540C	MJS1	1	PASI-A
		SM 2540D	MJS1	1	PASI-A
		SM 4500-S2D	EWS	1	PASI-A
		EPA 218.7	AEM	1	PASI-O
		EPA 353.2	WRC	1	PASI-A
		SM 5310B	AES2	1	PASI-A
2322876002	EB-JJZ-1	RSK 175	DR1	1	PASI-M
		EPA 300.0	CDC	3	PASI-W
		EPA 200.7	SH1	7	PASI-A
		EPA 200.7	JMW	4	PASI-A
		EPA 200.8 Rev 5.4	CDF	13	PASI-A
		EPA 1631E	ANB	1	PASI-A
		SM 2320B	KDF	3	PASI-A
		SM 2540C	MJS1	1	PASI-A
		SM 2540D	MJS1	1	PASI-A
		SM 4500-S2D	EWS	1	PASI-A
		EPA 218.7	AEM	1	PASI-O
		EPA 353.2	WRC	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92322876003	NORTH OF S-10 + 11 BLANK	EPA 1631E	ANB	1	PASI-A
92322876004	EB-JJZ-1 BLANK	EPA 1631E	ANB	1	PASI-A

REPORT OF LABORATORY ANALYSIS



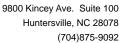
SUMMARY OF DETECTION

Project: BELEWS J16090796

Pace Project No.: 92322876

Method 22322876001 RSK 175 EPA 300.0 EPA 300.0 EPA 200.7 EPA 200.7	Parameters NORTH OF S-10+11 Methane Bromide Chloride Sulfate Aluminum Barium Boron Iron Manganese Strontium	3.4J 5.2 430 87.9 80.2J 234 8680 204	ug/L mg/L mg/L mg/L ug/L ug/L	0.90 9.0 1.0	Analyzed 12/23/16 17:39 12/14/16 22:02 12/14/16 22:02	Qualifiers
RSK 175 EPA 300.0 EPA 300.0 EPA 300.0 EPA 200.7	Methane Bromide Chloride Sulfate Aluminum Barium Boron Iron Manganese Strontium	5.2 430 87.9 80.2J 234 8680	mg/L mg/L mg/L ug/L	0.90 9.0 1.0	12/14/16 22:02 12/14/16 22:02	
EPA 300.0 EPA 300.0 EPA 300.0 EPA 300.0 EPA 200.7	Bromide Chloride Sulfate Aluminum Barium Boron Iron Manganese Strontium	5.2 430 87.9 80.2J 234 8680	mg/L mg/L mg/L ug/L	0.90 9.0 1.0	12/14/16 22:02 12/14/16 22:02	
EPA 300.0 EPA 300.0 EPA 300.0 EPA 200.7	Chloride Sulfate Aluminum Barium Boron Iron Manganese Strontium	430 87.9 80.2J 234 8680	mg/L mg/L ug/L	9.0 1.0	12/14/16 22:02	
EPA 300.0 EPA 200.7	Sulfate Aluminum Barium Boron Iron Manganese Strontium	87.9 80.2J 234 8680	mg/L ug/L	1.0		
EPA 200.7	Aluminum Barium Boron Iron Manganese Strontium	80.2J 234 8680	mg/L ug/L			
EPA 200.7	Barium Boron Iron Manganese Strontium	234 8680	_		12/14/16 12:53	
EPA 200.7	Boron Iron Manganese Strontium	8680	_	100	12/15/16 01:54	
EPA 200.7	Iron Manganese Strontium			5.0	12/15/16 01:54	
EPA 200.7	Manganese Strontium	204	ug/L	50.0	12/15/16 01:54	
EPA 200.7	Strontium	∠∪4	ug/L	50.0	12/15/16 12:23	
EPA 200.7	Strontium	7670	ug/L	5.0	12/15/16 12:23	
EPA 200.7 EPA 200.7		656	ug/L	5.0	12/15/16 01:54	
EPA 200.7 EPA 200.7	Zinc	10.8	ug/L	10.0	12/15/16 12:23	
EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7	Aluminum, Dissolved	92.7J	ug/L	100	12/16/16 01:50	
EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7	Barium, Dissolved	257	ug/L	5.0	12/16/16 01:50	
EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7	Boron, Dissolved	9570	ug/L	50.0	12/16/16 01:50	
EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7	Calcium, Dissolved	162000	ug/L	1000	12/16/16 14:03	
EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7	Iron, Dissolved	169	ug/L	50.0	12/16/16 01:50	
EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7	Magnesium, Dissolved	48100	ug/L	100	12/16/16 01:50	
EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7	Manganese, Dissolved	7410	ug/L	5.0	12/16/16 01:50	
EPA 200.7 EPA 200.7 EPA 200.7	Potassium, Dissolved	5200	ug/L	5000	12/16/16 01:50	
EPA 200.7 EPA 200.7	Sodium, Dissolved	13200	ug/L	5000	12/16/16 01:50	
EPA 200.7	Strontium, Dissolved	686	ug/L	5.0	12/16/16 01:50	
	Zinc, Dissolved	10.5	ug/L	10.0	12/16/16 01:50	
	Calcium	172000	ug/L	1000	12/19/16 14:18	
EPA 200.7	Magnesium	57700	ug/L	100	12/16/16 16:52	
EPA 200.7	Potassium	8250	ug/L	5000	12/16/16 16:52	
EPA 200.7	Sodium	18700	ug/L	5000	12/16/16 16:52	
EPA 200.8 Rev 5.4	Arsenic	1.2	ug/L	0.10	12/15/16 12:44	
EPA 200.8 Rev 5.4	Beryllium	0.94	ug/L		12/15/16 12:44	
EPA 200.8 Rev 5.4	Cadmium	0.66	ug/L		12/15/16 12:44	
EPA 200.8 Rev 5.4	Chromium	0.13J	ug/L			
EPA 200.8 Rev 5.4	Cobalt	65.8	ug/L		12/15/16 12:44	
EPA 200.8 Rev 5.4	Copper	0.68	ug/L		12/15/16 12:44	
EPA 200.8 Rev 5.4	Nickel	12.1	ug/L	0.50	12/15/16 12:44	
EPA 200.8 Rev 5.4	Selenium	6.5	ug/L		12/15/16 12:44	
EPA 200.8 Rev 5.4	Thallium	0.38	ug/L	0.10	12/15/16 12:44	
EPA 200.8 Rev 5.4	Arsenic, Dissolved	1.1	ug/L		12/15/16 13:47	
EPA 200.8 Rev 5.4	Beryllium, Dissolved	1.1	ug/L ug/L		12/15/16 13:47	
EPA 200.8 Rev 5.4	Cadmium, Dissolved	0.63	ug/L		12/15/16 13:47	
EPA 200.8 Rev 5.4	Chromium, Dissolved	0.03 0.18J	ug/L ug/L		12/15/16 13:47	
EPA 200.8 Rev 5.4	Cobalt, Dissolved	62.5	ug/L		12/15/16 13:47	
			-			5
EPA 200.8 Rev 5.4 EPA 200.8 Rev 5.4	Copper, Dissolved Nickel, Dissolved	0.65 11.7	ug/L		12/15/16 13:47 E	,
	Selenium, Dissolved		ug/L		12/15/16 13:47	
EPA 200.8 Rev 5.4	Thallium, Dissolved	6.2 0.34	ug/L			
EPA 200.8 Rev 5.4	·		ug/L		12/15/16 13:47	
EPA 1631E	Mercury	33.6	ng/L		12/14/16 11:40	
SM 2320B	Alkalinity, Bicarbonate (CaCO3)	4.8J	mg/L		12/14/16 02:40	
SM 2320B SM 2540C	Alkalinity, Total as CaCO3	4.8J	mg/L	5.0	12/14/16 02:40	

REPORT OF LABORATORY ANALYSIS





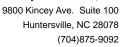
SUMMARY OF DETECTION

Project: BELEWS J16090796

Pace Project No.: 92322876

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92322876001	NORTH OF S-10+11			_ .		
EPA 218.7	Chromium, Hexavalent	1.2	ug/L	0.62	12/21/16 10:56	
EPA 353.2	Nitrogen, NO2 plus NO3	0.10	mg/L	0.020	12/21/16 18:17	
92322876002	EB-JJZ-1					
RSK 175	Methane	1.9J	ug/L	10.0	12/23/16 17:55	
EPA 200.7	Zinc	39.4	ug/L	10.0	12/15/16 12:26	
EPA 1631E	Mercury	0.319J	ng/L	0.50	12/14/16 12:03	
EPA 218.7	Chromium, Hexavalent	0.019J	ug/L	0.025	12/21/16 09:25	

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: RSK 175

Description: RSK 175 AIR Headspace

Client: Duke Energy

Date: January 11, 2017

General Information:

2 samples were analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

EPA 300.0 Method:

Description: 3000 IC Anions 28 Days, GWD

Client: **Duke Energy** Date: January 11, 2017

General Information:

2 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

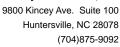
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: EPA 200.7
Description: 200.7 MET ICP
Client: Duke Energy
Date: January 11, 2017

General Information:

2 samples were analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 340496

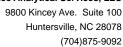
A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92322679001,92322877001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1889893)
 - Aluminum
- MSD (Lab ID: 1889894)
 - Aluminum

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: EPA 200.7

Description: 200.7 MET ICP, Dissolved

Client: Duke Energy

Date: January 11, 2017

General Information:

1 sample was analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS



Project: BELEWS J16090796

Pace Project No.: 92322876

Method: EPA 200.7

Description: 200.7 MET ICP, No Prep

Client: Duke Energy

Date: January 11, 2017

General Information:

2 samples were analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

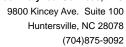
QC Batch: 341069

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92322996058,92323208004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1892013)
 - Calcium
 - Magnesium
 - Potassium
 - Sodium
- MS (Lab ID: 1892015)
 - Calcium
 - Magnesium
 - Potassium
 - Sodium
- MSD (Lab ID: 1892014)
 - Calcium
 - Magnesium
 - Potassium
 - Sodium
- MSD (Lab ID: 1892016)
 - Calcium
 - Magnesium
 - Potassium
 - Sodium

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

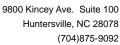
Method: EPA 200.7

Description: 200.7 MET ICP, No Prep

Client: Duke Energy
Date: January 11, 2017

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: EPA 200.8 Rev 5.4
Description: 200.8 MET ICPMS
Client: Duke Energy
Date: January 11, 2017

General Information:

2 samples were analyzed for EPA 200.8 Rev 5.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 200.8 Rev 5.4 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

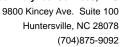
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: EPA 200.8 Rev 5.4

Description: 200.8 MET ICPMS, Dissolved

Client: Duke Energy

Date: January 11, 2017

General Information:

1 sample was analyzed for EPA 200.8 Rev 5.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 200.8 Rev 5.4 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 340493

- B: Analyte was detected in the associated method blank.
 - BLANK for HBN 340493 [MPRP/241 (Lab ID: 1888523)
 - Copper, Dissolved

Laboratory Control Spike:

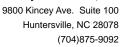
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: EPA 1631E

Description: 1631E Mercury, Low Level

Client: Duke Energy

Date: January 11, 2017

General Information:

4 samples were analyzed for EPA 1631E. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 1631E with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

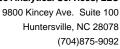
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: SM 2320B
Description: 2320B Alkalinity
Client: Duke Energy
Date: January 11, 2017

General Information:

2 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

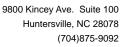
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: SM 2540C

Description: 2540C Total Dissolved Solids

Client: Duke Energy

Date: January 11, 2017

General Information:

2 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

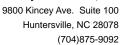
QC Batch: 340794

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1890242)
 - Total Dissolved Solids

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: SM 2540D

Description: 2540D Total Suspended Solids

Client: Duke Energy

Date: January 11, 2017

General Information:

2 samples were analyzed for SM 2540D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

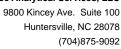
QC Batch: 340920

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1891244)
 - Total Suspended Solids
- DUP (Lab ID: 1891304)
 - Total Suspended Solids

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: SM 4500-S2D

Description: 4500S2D Sulfide Water

Client: Duke Energy

Date: January 11, 2017

General Information:

2 samples were analyzed for SM 4500-S2D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 340775

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92322877003,92323130001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1890153)
 - Sulfide
- MSD (Lab ID: 1890154)
 - Sulfide

Additional Comments:

REPORT OF LABORATORY ANALYSIS





PROJECT NARRATIVE

Project: BELEWS J16090796

Pace Project No.: 92322876

Method: **EPA 218.7**

Description: Hexavalent Chromium by IC

Client: **Duke Energy** Date: January 11, 2017

General Information:

2 samples were analyzed for EPA 218.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

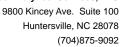
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: EPA 353.2

Description: 353.2 Nitrogen, NO2/NO3 pres.

Client: Duke Energy

Date: January 11, 2017

General Information:

2 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

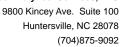
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: BELEWS J16090796

Pace Project No.: 92322876

Method: SM 5310B
Description: 5310B TOC
Client: Duke Energy
Date: January 11, 2017

General Information:

2 samples were analyzed for SM 5310B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS



ANALYTICAL RESULTS

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

Sample: NORTH OF S-10+11	Lab ID:	92322876001	Collected	d: 12/09/16	3 14:30	Received: 12/	/12/16 08:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical	Method: RSK 1	75						
Methane	3.4J	ug/L	10.0	0.49	1		12/23/16 17:39	74-82-8	
3000 IC Anions 28 Days, GWD	Analytical I	Method: EPA 3	0.00						
Bromide	5.2	mg/L	0.90	0.45	9		12/14/16 22:02	24959-67-9	
Chloride	430	mg/L	9.0	0.90	9		12/14/16 22:02	16887-00-6	
Sulfate	87.9	mg/L	1.0	0.40	1		12/14/16 12:53	14808-79-8	
200.7 MET ICP	Analytical I	Method: EPA 2	00.7 Prepa	ration Meth	od: EP	A 200.7			
Aluminum	80.2J	ug/L	100	50.0	1	12/13/16 19:55	12/15/16 01:54	7429-90-5	
Barium	234	ug/L	5.0	2.5	1	12/13/16 19:55	12/15/16 01:54	7440-39-3	
Boron	8680	ug/L	50.0	25.0	1	12/13/16 19:55	12/15/16 01:54	7440-42-8	
Iron	204	ug/L	50.0	25.0	1	12/13/16 19:55	12/15/16 12:23	7439-89-6	
Manganese	7670	ug/L	5.0	2.5	1	12/13/16 19:55	12/15/16 12:23	7439-96-5	
Strontium	656	ug/L	5.0	2.5	1	12/13/16 19:55	12/15/16 01:54	7440-24-6	
Zinc	10.8	ug/L	10.0	2.5	1	12/13/16 19:55	12/15/16 12:23	7440-66-6	
200.7 MET ICP, Dissolved	Analytical I	Method: EPA 2	00.7 Prepa	ration Meth	od: EP	A 200.7			
Aluminum, Dissolved	92.7J	ug/L	100	50.0	1	12/15/16 13:34	12/16/16 01:50	7429-90-5	
Barium, Dissolved	257	ug/L	5.0	2.5	1	12/15/16 13:34	12/16/16 01:50	7440-39-3	
Boron, Dissolved	9570	ug/L	50.0	25.0	1	12/15/16 13:34	12/16/16 01:50	7440-42-8	
Calcium, Dissolved	162000	ug/L	1000	500	10	12/15/16 13:34	12/16/16 14:03	7440-70-2	
Iron, Dissolved	169	ug/L	50.0	25.0	1	12/15/16 13:34	12/16/16 01:50	7439-89-6	
Magnesium, Dissolved	48100	ug/L	100	50.0	1	12/15/16 13:34	12/16/16 01:50	7439-95-4	
Manganese, Dissolved	7410	ug/L	5.0	2.5	1	12/15/16 13:34	12/16/16 01:50	7439-96-5	
Potassium, Dissolved	5200	ug/L	5000	2500	1	12/15/16 13:34	12/16/16 01:50	7440-09-7	
Sodium, Dissolved	13200	ug/L	5000	500	1	12/15/16 13:34	12/16/16 01:50	7440-23-5	
Strontium, Dissolved	686	ug/L	5.0	2.5	1	12/15/16 13:34			
Zinc, Dissolved	10.5	ug/L	10.0	2.5	1	12/15/16 13:34	12/16/16 01:50	7440-66-6	
200.7 MET ICP, No Prep	Analytical I	Method: EPA 2	00.7						
Calcium	172000	ug/L	1000	500	10		12/19/16 14:18	7440-70-2	
Magnesium	57700	ug/L	100	50.0	1		12/16/16 16:52	7439-95-4	
Potassium	8250	ug/L	5000	2500	1		12/16/16 16:52	7440-09-7	
Sodium	18700	ug/L	5000	500	1		12/16/16 16:52	7440-23-5	
200.8 MET ICPMS	Analytical I	Method: EPA 2	00.8 Rev 5.	4 Preparat	ion Met	hod: EPA 200.8 F	Rev 5.4		
Antimony	ND	ug/L	0.50	0.10	1	12/13/16 18:40	12/15/16 12:44	7440-36-0	
Arsenic	1.2	ug/L	0.10	0.040	1	12/13/16 18:40	12/15/16 12:44	7440-38-2	
Beryllium	0.94	ug/L	0.10	0.010	1	12/13/16 18:40	12/15/16 12:44	7440-41-7	
Cadmium	0.66	ug/L	0.080	0.050	1	12/13/16 18:40	12/15/16 12:44	7440-43-9	
Chromium	0.13J	ug/L	0.50	0.090	1		12/15/16 12:44		
Cobalt	65.8	ug/L	0.10	0.010	1	12/13/16 18:40	12/15/16 12:44	7440-48-4	
Copper	0.68	ug/L	0.50	0.11	1		12/15/16 12:44		
Lead	ND	ug/L	0.10	0.090	1		12/15/16 12:44		
Molybdenum	ND	ug/L	0.50	0.11	1		12/15/16 12:44		

REPORT OF LABORATORY ANALYSIS



ANALYTICAL RESULTS

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

Sample: NORTH OF S-10+11	Lab ID: 9	2322876001	Collected:	12/09/16 1	14:30	Received: 12/	12/16 08:00 M	atrix: Water	
_			Report						
Parameters	Results —	Units	Limit	MDL _	DF	Prepared	Analyzed	CAS No.	Qua
200.8 MET ICPMS	Analytical M	lethod: EPA 20	00.8 Rev 5.4	Preparatio	n Met	hod: EPA 200.8 F	Rev 5.4		
Nickel	12.1	ug/L	0.50	0.44	1	12/13/16 18:40	12/15/16 12:44	7440-02-0	
Selenium	6.5	ug/L	0.50	0.31	1		12/15/16 12:44		
Γhallium	0.38	ug/L	0.10	0.015	1	12/13/16 18:40			
/anadium	ND	ug/L	0.30	0.070	1	12/13/16 18:40	12/15/16 12:44	7440-62-2	
200.8 MET ICPMS, Dissolved	Analytical M	lethod: EPA 20	00.8 Rev 5.4	Preparatio	n Met	hod: EPA 200.8 F	Rev 5.4		
Antimony, Dissolved	ND	ug/L	0.50	0.10	1	12/13/16 20:00	12/15/16 13:47	7440-36-0	
Arsenic, Dissolved	1.1	ug/L	0.10	0.040	1	12/13/16 20:00	12/15/16 13:47		
Beryllium, Dissolved	1.1	ug/L	0.10	0.010	1	12/13/16 20:00	12/15/16 13:47		
Cadmium, Dissolved	0.63	ug/L	0.080	0.050	1	12/13/16 20:00			
Chromium, Dissolved	0.18J	ug/L	0.50	0.090	1		12/15/16 13:47		
Cobalt, Dissolved	62.5	ug/L	0.10	0.010	1	12/13/16 20:00			n
Copper, Dissolved Lead, Dissolved	0.65 ND	ug/L	0.50	0.11 0.090	1 1	12/13/16 20:00 12/13/16 20:00			В
Lead, Dissolved Molybdenum, Dissolved	ND ND	ug/L ug/L	0.10 0.50	0.090		12/13/16 20:00			
Nickel, Dissolved	11.7	J	0.50	0.11	1 1	12/13/16 20:00	12/15/16 13:47		
Selenium, Dissolved	6.2	ug/L ug/L	0.50	0.44	1	12/13/16 20:00	12/15/16 13:47		
Fhallium, Dissolved	0.34	ug/L	0.10	0.015	1		12/15/16 13:47		
/anadium, Dissolved	ND	ug/L ug/L	0.10	0.070	1		12/15/16 13:47		
631E Mercury,Low Level	Analytical M	lethod: EPA 1	631E Prepai	ration Metho	od: EP	A 1631E			
Mercury	33.6	ng/L	0.50	0.25	1		12/14/16 11:40	7439-97-6	
2320B Alkalinity	Analytical M	lethod: SM 23	20B						
Alkalinity,Bicarbonate (CaCO3)	4.8J	mg/L	5.0	1.0	1		12/14/16 02:40		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	1.0	1		12/14/16 02:40		
Alkalinity, Total as CaCO3	4.8J	mg/L	5.0	1.0	1		12/14/16 02:40		
2540C Total Dissolved Solids	Analytical M	lethod: SM 25	40C						
Total Dissolved Solids	780	mg/L	50.0	50.0	1		12/14/16 20:47		
2540D Total Suspended Solids	Analytical M	lethod: SM 25	40D						
Fotal Suspended Solids	ND	mg/L	2.5	2.5	1		12/14/16 19:42		
1500S2D Sulfide Water	Analytical M	lethod: SM 45	00-S2D						
Sulfide	ND	mg/L	0.10	0.10	1		12/14/16 12:45	18496-25-8	
Hexavalent Chromium by IC	Analytical M	lethod: EPA 2	18.7						
Chromium, Hexavalent	1.2	ug/L	0.62	0.20	25		12/21/16 10:56	18540-29-9	
353.2 Nitrogen, NO2/NO3 pres.		lethod: EPA 3							
Nitrogen, NO2 plus NO3	0.10	mg/L	0.020	0.010	1		12/21/16 18:17		
3310B TOC		lethod: SM 53		2.2.0	•				
	ND			0.50	1		12/20/16 15:07	7440.44.0	
Total Organic Carbon	ND	mg/L	1.0	0.50	1		12/20/10 15:07	1440-44-U	

REPORT OF LABORATORY ANALYSIS



ANALYTICAL RESULTS

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

Sample: EB-JJZ-1	Lab ID:	92322876002	Collected	d: 12/09/16	5 15:30	Received: 12/	12/16 08:00 M	latrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
RSK 175 AIR Headspace	Analytical	Method: RSK 1	75						
Methane	1.9J	ug/L	10.0	0.49	1		12/23/16 17:55	74-82-8	
3000 IC Anions 28 Days, GWD	Analytical	Method: EPA 3	0.00						
Bromide	ND	mg/L	0.10	0.050	1		12/14/16 13:47	24959-67-9	
Chloride	ND	mg/L	1.0	0.10	1		12/14/16 13:47	16887-00-6	
Sulfate	ND	mg/L	1.0	0.40	1		12/14/16 13:47	14808-79-8	
200.7 MET ICP	Analytical	Method: EPA 2	00.7 Prepa	ration Meth	od: EPA	A 200.7			
Aluminum	ND	ug/L	100	50.0	1	12/13/16 19:55	12/15/16 02:07	7429-90-5	
Barium	ND	ug/L	5.0	2.5	1	12/13/16 19:55	12/15/16 02:07		
Boron	ND ND	ug/L ug/L	50.0	25.0	1		12/15/16 02:07		
ron	ND	ug/L	50.0	25.0	1		12/15/16 12:26		
		-					12/15/16 12:26		
Manganese	ND	ug/L	5.0	2.5	1				
Strontium	ND	ug/L	5.0	2.5	1	12/13/16 19:55			
linc	39.4	ug/L	10.0	2.5	1	12/13/16 19:55	12/15/16 12:26	7440-66-6	
00.7 MET ICP, No Prep	Analytical	Method: EPA 2	00.7						
Calcium	ND	ug/L	100	50.0	1		12/16/16 16:57	7440-70-2	
/lagnesium	ND	ug/L	100	50.0	1		12/16/16 16:57	7439-95-4	
Potassium	ND	ug/L	5000	2500	1		12/16/16 16:57	7440-09-7	
Sodium	ND	ug/L	5000	500	1		12/16/16 16:57	7440-23-5	
200.8 MET ICPMS	Analytical	Method: EPA 2	00.8 Rev 5.	4 Preparat	ion Met	hod: EPA 200.8 F	Rev 5.4		
Antimony	ND	ug/L	0.50	0.10	1	12/13/16 18:40	12/15/16 12:46	7440-36-0	
Arsenic	ND	ug/L	0.10	0.040	1	12/13/16 18:40	12/15/16 12:46	7440-38-2	
Beryllium	ND	ug/L	0.10	0.010	1		12/15/16 12:46		
Cadmium	ND	ug/L	0.080	0.050	1		12/15/16 12:46		
Chromium	ND	ug/L	0.50	0.090	1		12/15/16 12:46		
Cobalt	ND	ug/L	0.10	0.010	1		12/15/16 12:46		
Copper	ND	ug/L	0.50	0.11	1		12/15/16 12:46		
ead.	ND	ug/L	0.10	0.090	1		12/15/16 12:46		
Molybdenum	ND	ug/L	0.50	0.030	1	12/13/16 18:40			
Vickel	ND ND	ug/L ug/L	0.50	0.11	1		12/15/16 12:46		
Nickei Selenium		•			1				
	ND ND	ug/L	0.50	0.31			12/15/16 12:46		
⁻ hallium /anadium	ND ND	ug/L ug/L	0.10 0.30	0.015 0.070	1 1		12/15/16 12:46 12/15/16 12:46		
		ŭ					12/10/10 12:10	7110 02 2	
631E Mercury,Low Level	•	Method: EPA 1	·				40/44/40 40 00	7420.07.0	
Mercury	0.319J	ng/L	0.50	0.25	1	12/14/16 08:37	12/14/16 12:03	/439-9/-6	
2320B Alkalinity	Analytical	Method: SM 23	320B						
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.0	1		12/14/16 02:48	1	
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	1.0	1		12/14/16 02:48	;	
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.0	1		12/14/16 02:48		

REPORT OF LABORATORY ANALYSIS

800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092

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ANALYTICAL RESULTS

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

Sample: EB-JJZ-1	Lab ID:	92322876002	Collected	d: 12/09/10	6 15:30	Received: 12	/12/16 08:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical	Method: SM 25	540C						
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		12/14/16 20:48		
2540D Total Suspended Solids	Analytical	Method: SM 25	540D						
Total Suspended Solids	ND	mg/L	2.5	2.5	1		12/14/16 19:43		
4500S2D Sulfide Water	Analytical	Method: SM 45	500-S2D						
Sulfide	ND	mg/L	0.10	0.10	1		12/14/16 12:45	18496-25-8	
Hexavalent Chromium by IC	Analytical	Method: EPA 2	18.7						
Chromium, Hexavalent	0.019J	ug/L	0.025	0.0082	1		12/21/16 09:25	18540-29-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	ND	mg/L	0.020	0.010	1		12/21/16 18:20		
5310B TOC	Analytical	Method: SM 53	310B						
Total Organic Carbon	ND	mg/L	1.0	0.50	1		12/20/16 04:44	7440-44-0	

REPORT OF LABORATORY ANALYSIS

CAS No.

Qual

Analyzed

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ANALYTICAL RESULTS

Project: BELEWS J16090796

Pace Project No.: 92322876

Sample: NORTH OF S-10 + 11 Lab ID: 92322876003 Collected: 12/09/16 14:30 Received: 12/12/16 08:00 Matrix: Water

Report

BLANK

1631E Mercury,Low Level

Date: 01/11/2017 02:35 PM

Parameters Results Units Limit MDL DF Prepared

Mercury ND ng/L 0.50 0.25 1 12/14/16 08:37 12/14/16 12:18 7439-97-6

Analytical Method: EPA 1631E Preparation Method: EPA 1631E

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

Sample: EB-JJZ-1 BLANK Lab ID: 92322876004 Collected: 12/09/16 15:30 Received: 12/12/16 08:00 Matrix: Water

Report

Parameters Results Units Limit MDL DF Prepared Analyzed CAS No. Qual

1631E Mercury,Low LevelAnalytical Method: EPA 1631E Preparation Method: EPA 1631E

Mercury ND ng/L 0.50 0.25 1 12/14/16 08:37 12/14/16 12:25 7439-97-6

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 453165 Analysis Method: RSK 175

QC Batch Method: RSK 175 Analysis Description: RSK 175 AIR HEADSPACE

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 2480699 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Methane ug/L 2.0J 10.0 0.49 12/23/16 15:51

LABORATORY CONTROL SAMPLE & LCSD: 2480700 2480701 Spike LCS LCS LCSD **LCSD** % Rec Max Parameter Units Conc. Result Result % Rec % Rec Limits **RPD RPD** Qualifiers Methane ug/L 60.7 62.3 60.9 103 100 85-115 2 20 SAMPLE DUPLICATE: 2482107

ParameterUnits92323450018 ResultDup ResultMax ResultRPDQualifiersMethaneug/L1.4J1.2J20

 SAMPLE DUPLICATE:
 2482108

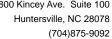
 92322876001
 Dup
 Max

 Parameter
 Units
 Result
 Result
 RPD
 RPD
 Qualifiers

Methane ug/L 3.4J 3.4J 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS





QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 340766 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 3000 IC Anions, GWD

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1890116 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.10	0.050	12/14/16 09:34	
Chloride	mg/L	ND	1.0	0.10	12/14/16 09:34	
Sulfate	mg/L	ND	1.0	0.40	12/14/16 09:34	

LABORATORY CONTROL SAMPLE:	1890117					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Bromide	mg/L	2.5	2.4	95	90-110	
Chloride	mg/L	50	49.6	99	90-110	
Sulfate	mg/L	50	47.8	96	90-110	

MATRIX SPIKE & MATRIX SF	PIKE DUPLICA	ATE: 18901	18		1890119							
			MS	MSD								
	9	2322493001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Bromide	mg/L	0.21	2.5	2.5	2.6	2.7	96	99	90-110	3	20	
Chloride	mg/L	23.9	50	50	74.5	75.4	101	103	90-110	1	20	
Sulfate	mg/L	15.5	50	50	66.7	66.9	102	103	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 341069 Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7 Analysis Description: ICP Metals, Trace, No Prep

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1892011 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Calcium	ug/L	ND	100	50.0	12/16/16 16:33	
Magnesium	ug/L	ND	100	50.0	12/16/16 16:33	
Potassium	ug/L	ND	5000	2500	12/16/16 16:33	
Sodium	ug/L	ND	5000	500	12/16/16 16:33	

LABORATORY CONTROL SAMPLE:	1892012					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Calcium	ug/L	5000	5020	100	85-115	
Magnesium	ug/L	5000	5380	108	85-115	
Potassium	ug/L	5000	5330	107	85-115	
Sodium	ug/L	5000	5110	102	85-115	

MATRIX SPIKE & MATRIX SPI	KE DUPLIC	ATE: 18920	13		1892014							
			MS	MSD								
		92322996058	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Calcium	ug/L	ND	5000	5000	871	867	17	17	70-130	0	20	M1
Magnesium	ug/L	ND	5000	5000	961	957	19	19	70-130	0	20	M1
Potassium	ug/L	ND	5000	5000	ND	ND	18	18	70-130		20	M1
Sodium	ug/L	ND	5000	5000	968J	963J	16	16	70-130		20	M1

MATRIX SPIKE & MATRIX SPIR	KE DUPLIC	CATE: 18920	15		1892016							
			MS	MSD								
		92323208004	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Calcium	ug/L	20200	5000	5000	21000	21000	15	15	70-130	0	20	M1
Magnesium	ug/L	6030	5000	5000	6790	6700	15	13	70-130	1	20	M1
Potassium	ug/L	3070J	5000	5000	4040J	3990J	19	18	70-130		20	M1
Sodium	ug/L	13100	5000	5000	14000	13800	18	14	70-130	2	20	M1

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REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

QC Batch: 340763 EPA 1631E Analysis Method:

QC Batch Method: **EPA 1631E** Analysis Description: 1631E Mercury, Low Level

92322876001, 92322876002, 92322876003, 92322876004 Associated Lab Samples:

METHOD BLANK: 1890100 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002, 92322876003, 92322876004

> Blank Reporting

MDL Parameter Units Result Limit Analyzed Qualifiers

ND 0.50 Mercury ng/L 0.25 12/14/16 10:08

METHOD BLANK: 1890101 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002, 92322876003, 92322876004

Blank Reporting

Limit MDL Parameter Units Result Analyzed Qualifiers ND 0.50 0.25 12/14/16 12:10 Mercury ng/L

METHOD BLANK: 1890102 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002, 92322876003, 92322876004

Blank

Reporting

Parameter Units Result Limit MDL Analyzed Qualifiers

ND 0.50 0.25 12/14/16 13:35 Mercury ng/L

LABORATORY CONTROL SAMPLE: 1890103

Date: 01/11/2017 02:35 PM

LCS LCS Spike % Rec Parameter Units Conc. Result % Rec Limits Qualifiers

Mercury 5 4.84 97 80-120 ng/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1890104 1890105

MS MSD 92322872001 Spike Spike MS MSD MS MSD % Rec Max RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** Qual

1.77 25 27.0 101 71-125 0 24 Mercury ng/L 25 26.9 101

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1890106 1890107

MS MSD 92322876001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 71-125 Mercury ng/L 33.6 25 25 57.1 57.3 94 95 0 24

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REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 340496 Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1888539 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	50.0	12/15/16 01:08	
Barium	ug/L	ND	5.0	2.5	12/15/16 01:08	
Boron	ug/L	ND	50.0	25.0	12/15/16 01:08	
Iron	ug/L	ND	50.0	25.0	12/15/16 01:08	
Manganese	ug/L	ND	5.0	2.5	12/15/16 01:08	
Strontium	ug/L	ND	5.0	2.5	12/15/16 01:08	
Zinc	ug/L	ND	10.0	2.5	12/15/16 11:49	

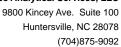
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
luminum	ug/L	5000	4820	96	85-115	
arium	ug/L	500	489	98	85-115	
oron	ug/L	500	485	97	85-115	
on	ug/L	5000	4630	93	85-115	
nganese	ug/L	500	464	93	85-115	
ontium	ug/L	500	487	97	85-115	
nc	ug/L	500	507	101	85-115	

MATRIX SPIKE & MATRIX SF	PIKE DUPLICA	ATE: 18898	93		1889894							
			MS	MSD								
	g	2322679001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Aluminum	ug/L	32.8 mg/L	5000	5000	40900	40300	163	151	70-130	2	20	M6
Barium	ug/L	0.21 mg/L	500	500	691	698	95	97	70-130	1	20	
Boron	ug/L	ND	500	500	584	610	90	95	70-130	4	20	
Iron	ug/L	24.6 mg/L	5000	5000	29100	29200	91	93	70-130	0	20	
Manganese	ug/L	0.48 mg/L	500	500	928	936	90	92	70-130	1	20	
Strontium	ug/L	0.079 mg/L	500	500	558	564	96	97	70-130	1	20	
Zinc	ug/L	4.3 mg/L	500	500	4800	4800	107	106	70-130	0	20	

MATRIX SPIKE & MATRIX SPI	KE DUPLICA	TE: 18898	97		1889898							
			MS	MSD								
	92	2322877001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Aluminum	ug/L	61.8J	5000	5000	4820	4830	95	95	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS





QUALITY CONTROL DATA

Project: BELEWS J16090796

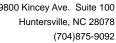
Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

MATRIX SPIKE & MATRIX S	PIKE DUPLICA	TE: 18898	97		1889898							
_	_	2322877001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Barium	ug/L	40.5	500	500	520	522	96	96	70-130	0	20	
Boron	ug/L	ND	500	500	478	481	94	95	70-130	1	20	
Iron	ug/L	53.8	5000	5000	5140	5090	102	101	70-130	1	20	
Manganese	ug/L	46.9	500	500	561	553	103	101	70-130	2	20	
Strontium	ug/L	332	500	500	810	817	96	97	70-130	1	20	
Zinc	ug/L	2.6J	500	500	512	509	102	101	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS





QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

QC Batch: 340915 Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET Dissolved

Associated Lab Samples: 92322876001

METHOD BLANK: 1891192 Matrix: Water

Associated Lab Samples: 92322876001

LABORATORY CONTROL SAMPLE:

Date: 01/11/2017 02:35 PM

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND ND	100	50.0	12/16/16 00:15	
Barium, Dissolved	ug/L	ND	5.0	2.5	12/16/16 00:15	
Boron, Dissolved	ug/L	ND	50.0	25.0	12/16/16 00:15	
Calcium, Dissolved	ug/L	ND	100	50.0	12/16/16 00:15	
Iron, Dissolved	ug/L	ND	50.0	25.0	12/16/16 00:15	
Magnesium, Dissolved	ug/L	ND	100	50.0	12/16/16 00:15	
Manganese, Dissolved	ug/L	ND	5.0	2.5	12/16/16 00:15	
Potassium, Dissolved	ug/L	ND	5000	2500	12/16/16 00:15	
Sodium, Dissolved	ug/L	ND	5000	500	12/16/16 00:15	
Strontium, Dissolved	ug/L	ND	5.0	2.5	12/16/16 00:15	
Zinc, Dissolved	ug/L	ND	10.0	2.5	12/16/16 00:15	

		Spike	LCS	LCS	% Rec
Parameter	Units	Conc.	Result	% Rec	Limits

1891193

Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Aluminum, Dissolved	ug/L	5000	5080	102	85-115	
Barium, Dissolved	ug/L	500	514	103	85-115	
Boron, Dissolved	ug/L	500	500	100	85-115	
Calcium, Dissolved	ug/L	5000	5100	102	85-115	
Iron, Dissolved	ug/L	5000	4930	99	85-115	
Magnesium, Dissolved	ug/L	5000	4860	97	85-115	
Manganese, Dissolved	ug/L	500	500	100	85-115	
Potassium, Dissolved	ug/L	5000	5050	101	85-115	
Sodium, Dissolved	ug/L	5000	4930J	99	85-115	
Strontium, Dissolved	ug/L	500	507	101	85-115	
Zinc, Dissolved	ug/L	500	513	103	85-115	

MATRIX SPIKE & MATRIX SF	PIKE DUPLICA	ATE: 189119	94		1891195							
			MS	MSD								
	g	2322890002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Aluminum, Dissolved	ug/L	ND	5000	5000	5300	5260	105	104	70-130	1	20	
Barium, Dissolved	ug/L	44.8	500	500	575	569	106	105	70-130	1	20	
Boron, Dissolved	ug/L	ND	500	500	524	528	104	104	70-130	1	20	
Calcium, Dissolved	ug/L	13400	5000	5000	18500	18300	102	98	70-130	1	20	

,	•										
Calcium, Dissolved	ug/L	13400	5000	5000	18500	18300	102	98	70-130	1	20
Iron, Dissolved	ug/L	ND	5000	5000	5170	5110	103	102	70-130	1	20
Magnesium, Dissolved	ug/L	5650	5000	5000	10600	10600	99	99	70-130	0	20
Manganese, Dissolved	ug/L	ND	500	500	518	522	103	104	70-130	1	20

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REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

MATRIX SPIKE & MATRIX SPI												
		92322890002	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Potassium, Dissolved	ug/L		5000	5000	6980	6900	105	103	70-130	1	20	
Sodium, Dissolved	ug/L	8750	5000	5000	13600	13500	98	95	70-130	1	20	
Strontium, Dissolved	ug/L	111	500	500	636	631	105	104	70-130	1	20	
Zinc, Dissolved	ug/L	ND	500	500	544	551	109	110	70-130	1	20	

MATRIX SPIKE & MATRIX S	PIKE DUPLICA	ATE: 189119	96 MS	MSD	1891197							
Parameter	9 Units	2322890012 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	5000	5000	5250	5300	104	105	70-130		20	
Barium, Dissolved	ug/L	18.5	500	500	550	554	106	107	70-130	1	20	
Boron, Dissolved	ug/L	32.3J	500	500	561	569	106	107	70-130	1	20	
Calcium, Dissolved	ug/L	36600	5000	5000	41400	41200	95	92	70-130	0	20	
Iron, Dissolved	ug/L	ND	5000	5000	4920	5040	98	101	70-130	2	20	
Magnesium, Dissolved	ug/L	6990	5000	5000	11700	12000	95	99	70-130	2	20	
Manganese, Dissolved	ug/L	19.3	500	500	520	532	100	103	70-130	2	20	
Potassium, Dissolved	ug/L	9880	5000	5000	14900	15000	100	101	70-130	0	20	
Sodium, Dissolved	ug/L	50700	5000	5000	55200	55500	89	97	70-130	1	20	
Strontium, Dissolved	ug/L	191	500	500	700	707	102	103	70-130	1	20	
Zinc, Dissolved	ug/L	ND	500	500	537	540	107	108	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 340490 Analysis Method: EPA 200.8 Rev 5.4

QC Batch Method: EPA 200.8 Rev 5.4 Analysis Description: 200.8 MET

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1888505 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

,	,					
		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	0.50	0.10	12/15/16 12:25	
Arsenic	ug/L	ND	0.10	0.040	12/15/16 12:25	
Beryllium	ug/L	ND	0.10	0.010	12/15/16 12:25	
Cadmium	ug/L	ND	0.080	0.050	12/15/16 12:25	
Chromium	ug/L	ND	0.50	0.090	12/15/16 12:25	
Cobalt	ug/L	ND	0.10	0.010	12/15/16 12:25	
Copper	ug/L	ND	0.50	0.11	12/15/16 12:25	
_ead	ug/L	ND	0.10	0.090	12/15/16 12:25	
Molybdenum	ug/L	ND	0.50	0.11	12/15/16 12:25	
Nickel	ug/L	ND	0.50	0.44	12/15/16 12:25	
Selenium	ug/L	ND	0.50	0.31	12/15/16 12:25	
Γhallium	ug/L	ND	0.10	0.015	12/15/16 12:25	
/anadium	ug/L	ND	0.30	0.070	12/15/16 12:25	
	•					

LABORATORY CONTROL SAMPLE:	1888506					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Antimony	ug/L	100	99.6	100	85-115	
Arsenic	ug/L	100	101	101	85-115	
Beryllium	ug/L	100	106	106	85-115	
Cadmium	ug/L	100	104	104	85-115	
Chromium	ug/L	100	104	104	85-115	
Cobalt	ug/L	100	105	105	85-115	
Copper	ug/L	100	109	109	85-115	
_ead	ug/L	100	102	102	85-115	
Molybdenum	ug/L	100	101	101	85-115	
Nickel	ug/L	100	109	109	85-115	
Selenium	ug/L	100	101	101	85-115	
-hallium	ug/L	100	104	104	85-115	
√anadium	ug/L	100	104	104	85-115	

MATRIX SPIKE & MATRIX S	PIKE DUPLIC	ATE: 18885	07		1888508							
Parameter	Units	92322872001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	0.13J	100	100	103	104	103	104	70-130	1	20	
Arsenic	ug/L	0.23	100	100	104	103	104	103	70-130	1	20	
Beryllium	ug/L	0.051J	100	100	103	103	103	103	70-130	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

MATRIX SPIKE & MATRIX S	SPIKE DUPLICA	TE: 18885	07		1888508							
			MS	MSD								
	9:	2322872001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium	ug/L	ND	100	100	102	102	102	102	70-130	0	20	
Chromium	ug/L	0.87	100	100	102	103	101	102	70-130	1	20	
Cobalt	ug/L	0.33	100	100	104	105	104	105	70-130	1	20	
Copper	ug/L	1.5	100	100	107	108	106	106	70-130	0	20	
Lead	ug/L	0.62	100	100	102	102	101	102	70-130	1	20	
Molybdenum	ug/L	0.41J	100	100	101	102	101	101	70-130	0	20	
Nickel	ug/L	0.64	100	100	106	107	105	106	70-130	1	20	
Selenium	ug/L	ND	100	100	102	102	102	101	70-130	1	20	
Thallium	ug/L	ND	100	100	101	103	101	103	70-130	1	20	
Vanadium	ug/L	2.2	100	100	106	107	103	105	70-130	1	20	

MATRIX SPIKE & MATRIX S	09		1888510									
			MS	MSD								
	9	2322877005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	ug/L	ND	100	100	101	105	101	105	70-130	4	20	
Arsenic	ug/L	0.089J	100	100	103	104	103	103	70-130	1	20	
Beryllium	ug/L	0.016J	100	100	103	107	103	107	70-130	4	20	
Cadmium	ug/L	ND	100	100	101	104	101	104	70-130	2	20	
Chromium	ug/L	1.2	100	100	100	104	99	102	70-130	3	20	
Cobalt	ug/L	0.032J	100	100	99.6	102	100	102	70-130	3	20	
Copper	ug/L	0.90	100	100	101	104	100	103	70-130	3	20	
Lead	ug/L	ND	100	100	99.2	100	99	100	70-130	1	20	
Molybdenum	ug/L	ND	100	100	101	103	101	103	70-130	2	20	
Nickel	ug/L	0.92	100	100	102	105	101	104	70-130	3	20	
Selenium	ug/L	ND	100	100	99.3	103	99	103	70-130	3	20	
Thallium	ug/L	ND	100	100	99.5	103	99	103	70-130	3	20	
Vanadium	ug/L	1.3	100	100	102	106	101	105	70-130	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 340493 Analysis Method: EPA 200.8 Rev 5.4
QC Batch Method: EPA 200.8 Rev 5.4 Analysis Description: 200.8 MET Dissolved

Associated Lab Samples: 92322876001

METHOD BLANK: 1888523 Matrix: Water

Associated Lab Samples: 92322876001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
					- Tilaly200	Qualificio
Antimony, Dissolved	ug/L	ND	0.50	0.10	12/15/16 13:28	
Arsenic, Dissolved	ug/L	ND	0.10	0.040	12/15/16 13:28	
Beryllium, Dissolved	ug/L	ND	0.10	0.010	12/15/16 13:28	
Cadmium, Dissolved	ug/L	ND	0.080	0.050	12/15/16 13:28	
Chromium, Dissolved	ug/L	ND	0.50	0.090	12/15/16 13:28	
Cobalt, Dissolved	ug/L	ND	0.10	0.010	12/15/16 13:28	
Copper, Dissolved	ug/L	0.21J	0.50	0.11	12/15/16 13:28	
Lead, Dissolved	ug/L	ND	0.10	0.090	12/15/16 13:28	
Molybdenum, Dissolved	ug/L	ND	0.50	0.11	12/15/16 13:28	
Nickel, Dissolved	ug/L	ND	0.50	0.44	12/15/16 13:28	
Selenium, Dissolved	ug/L	ND	0.50	0.31	12/15/16 13:28	
Thallium, Dissolved	ug/L	ND	0.10	0.015	12/15/16 13:28	
Vanadium, Dissolved	ug/L	ND	0.30	0.070	12/15/16 13:28	

LABORATORY CONTROL SAMPLE:	1888524					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Antimony, Dissolved	ug/L	100	98.5	98	85-115	
Arsenic, Dissolved	ug/L	100	99.7	100	85-115	
Beryllium, Dissolved	ug/L	100	105	105	85-115	
Cadmium, Dissolved	ug/L	100	98.2	98	85-115	
Chromium, Dissolved	ug/L	100	97.8	98	85-115	
Cobalt, Dissolved	ug/L	100	100	100	85-115	
Copper, Dissolved	ug/L	100	102	102	85-115	
Lead, Dissolved	ug/L	100	96.9	97	85-115	
Molybdenum, Dissolved	ug/L	100	97.2	97	85-115	
Nickel, Dissolved	ug/L	100	104	104	85-115	
Selenium, Dissolved	ug/L	100	101	101	85-115	
Thallium, Dissolved	ug/L	100	96.4	96	85-115	
Vanadium, Dissolved	ug/L	100	100	100	85-115	

MATRIX SPIKE & MATRIX SPIK	E DUPLIC	CATE: 18885	25		1888526							
			MS	MSD								
		92322872001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony, Dissolved	ug/L	ND	100	100	98.2	103	98	103	70-130	4	20	
Arsenic, Dissolved	ug/L	0.15	100	100	99.0	101	99	101	70-130	2	20	
Beryllium, Dissolved	ug/L	0.019J	100	100	103	105	103	105	70-130	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

MATRIX SPIKE & MATRIX SP	PIKE DUPLICA	TE: 18885	25		1888526							
			MS	MSD								
	9.	2322872001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium, Dissolved	ug/L	ND ND	100	100	97.8	101	98	101	70-130	3	20	
Chromium, Dissolved	ug/L	0.21J	100	100	96.5	100	96	100	70-130	4	20	
Cobalt, Dissolved	ug/L	0.10	100	100	99.2	103	99	103	70-130	4	20	
Copper, Dissolved	ug/L	0.77	100	100	102	107	102	106	70-130	4	20	
Lead, Dissolved	ug/L	ND	100	100	96.3	101	96	101	70-130	5	20	
Molybdenum, Dissolved	ug/L	0.43J	100	100	96.8	99.9	96	99	70-130	3	20	
Nickel, Dissolved	ug/L	0.50	100	100	101	106	101	105	70-130	5	20	
Selenium, Dissolved	ug/L	ND	100	100	97.7	99.5	98	99	70-130	2	20	
Thallium, Dissolved	ug/L	ND	100	100	97.6	103	98	103	70-130	5	20	
Vanadium, Dissolved	ug/L	0.76	100	100	99.1	102	98	101	70-130	2	20	

MATRIX SPIKE & MATRIX S	PIKE DUPLICA	ATE: 188852	27		1888528							
			MS	MSD								
	9	2322877002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony, Dissolved	ug/L	0.34J	100	100	100	102	100	102	70-130	2	20	
Arsenic, Dissolved	ug/L	0.088J	100	100	99.0	103	99	103	70-130	4	20	
Beryllium, Dissolved	ug/L	ND	100	100	100	104	100	104	70-130	4	20	
Cadmium, Dissolved	ug/L	ND	100	100	97.0	101	97	101	70-130	4	20	
Chromium, Dissolved	ug/L	0.25J	100	100	97.7	99.9	97	100	70-130	2	20	
Cobalt, Dissolved	ug/L	0.24	100	100	97.3	100	97	100	70-130	3	20	
Copper, Dissolved	ug/L	1.3	100	100	101	104	99	102	70-130	3	20	
Lead, Dissolved	ug/L	ND	100	100	94.5	99.5	95	99	70-130	5	20	
Molybdenum, Dissolved	ug/L	2.1	100	100	101	102	98	100	70-130	1	20	
Nickel, Dissolved	ug/L	2.0	100	100	101	103	99	101	70-130	2	20	
Selenium, Dissolved	ug/L	ND	100	100	94.9	102	95	102	70-130	7	20	
Thallium, Dissolved	ug/L	ND	100	100	94.5	101	94	101	70-130	7	20	
Vanadium, Dissolved	ug/L	2.4	100	100	102	105	100	102	70-130	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 340547 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1888705 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	5.0	1.0	12/13/16 21:53	
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.0	12/13/16 21:53	
Alkalinity, Bicarbonate (CaCO3)	mg/L	ND	5.0	1.0	12/13/16 21:53	

LABORATORY CONTROL SAMPLE:	1888706	0 "				
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	47.7	95	80-120	

MATRIX SPIKE & MATRIX SP	IKE DUPLICA	ATE: 18887	07		1888708							
			MS	MSD								
	9	2322695013	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Alkalinity, Total as CaCO3	mg/L	339	50	50	390	394	102	111	80-120	1	25	

MATRIX SPIKE & MATRIX SPI	KE DUPLICA	TE: 18887	09		1888710							
			MS	MSD								
	92	2322704003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	50.1	50.4	100	100	80-120	1	25	

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REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

QC Batch: 340794 Analysis Method: SM 2540C

QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1890239 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 25.0 25.0 12/14/16 20:42

LABORATORY CONTROL SAMPLE: 1890240

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers **Total Dissolved Solids** mg/L 250 224 90 90-110

SAMPLE DUPLICATE: 1890241

Parameter Units Pesult Result RPD Max Result RPD Qualifiers

Total Dissolved Solids mg/L ND ND 5

SAMPLE DUPLICATE: 1890242

Date: 01/11/2017 02:35 PM

92322877002 Dup Max RPD Parameter Units Result Result **RPD** Qualifiers 273 **Total Dissolved Solids** mg/L 299 9 5 D6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

QC Batch: 340920 Analysis Method: SM 2540D

QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1891241 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Suspended Solids mg/L ND 2.5 2.5 12/14/16 19:40

LABORATORY CONTROL SAMPLE: 1891242

Spike LCS LCS % Rec Conc. Parameter Units Result % Rec Limits Qualifiers **Total Suspended Solids** mg/L 250 226 90 90-110

SAMPLE DUPLICATE: 1891244

92322877004 Dup Max RPD **RPD** Parameter Units Result Result Qualifiers 6.3 5 D6 mg/L 7.8 20 **Total Suspended Solids**

SAMPLE DUPLICATE: 1891304

Date: 01/11/2017 02:35 PM

92322841001 Dup Max RPD RPD Parameter Units Result Result Qualifiers 1010 Total Suspended Solids mg/L 760 28 5 D6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 340775 Analysis Method: SM 4500-S2D

QC Batch Method: SM 4500-S2D Analysis Description: 4500S2D Sulfide Water

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1890149 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Sulfide mg/L ND 0.10 0.10 12/14/16 12:45

LABORATORY CONTROL SAMPLE: 1890150

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Sulfide 0.51 102 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1890151 1890152

MS MSD 92323130001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Sulfide mg/L ND .5 .5 0.52 0.51 103 103 80-120 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1890153 1890154

MS MSD MS 92322877003 Spike Spike MS MSD MSD % Rec Max RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD Qual Sulfide ND .5 .5 0.38 0.38 74 73 80-120 10 M1 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 339808 Analysis Method: EPA 218.7

QC Batch Method: EPA 218.7 Analysis Description: Chromium, Hexavalent IC

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1822832 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Chromium, Hexavalent ug/L ND 0.025 0.0082 12/20/16 19:45

LABORATORY CONTROL SAMPLE: 1822833

Parameter Units Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers

 Chromium, Hexavalent
 ug/L
 .075
 0.078
 104
 85-115

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1822834 1822835

MS MSD 92322890016 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual

Chromium, Hexavalent ug/L 0.013J .075 .075 0.081 0.084 90 94 85-115 3 20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1822836 1822837

MS MSD MS 92322872004 Spike Spike MS MSD MSD % Rec Max RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD Qual Chromium, Hexavalent ND .5 .5 0.46J 0.57 93 114 85-115 20 ug/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 341583 Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved

Associated Lab Samples: 92322876001, 92322876002

METHOD BLANK: 1895287 Matrix: Water

Associated Lab Samples: 92322876001, 92322876002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Nitrogen, NO2 plus NO3 mg/L ND 0.020 0.010 12/21/16 18:14

LABORATORY CONTROL SAMPLE: 1895288

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Nitrogen, NO2 plus NO3 mg/L 2.5 2.5 98 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1895289 1895290

MS MSD 92322876001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Nitrogen, NO2 plus NO3 2.7 2.7 75-125 2 mg/L 0.10 2.5 2.5 103 105 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1895291 1895292

MS MSD MS MSD MS 92323208008 Spike Spike MSD % Rec Max Parameter Limits RPD Qual Units Result Conc. Conc. Result Result % Rec % Rec RPD Nitrogen, NO2 plus NO3 0.59 2.5 2.5 3.1 3.2 101 103 75-125 2 10 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 341404 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC

Associated Lab Samples: 92322876002

METHOD BLANK: 1894411 Matrix: Water

Associated Lab Samples: 92322876002

ParameterUnitsBlank Reporting ResultReporting LimitMDLAnalyzedQualifiersTotal Organic Carbonmg/LND1.00.5012/20/16 03:54

LABORATORY CONTROL SAMPLE: 1894412

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Total Organic Carbon mg/L 25 23.2 93 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1894413 1894414 MS MSD

92322876002 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual ND 25 90-110 0 **Total Organic Carbon** mg/L 25 23.5 23.6 94 94 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1894415 1894416

MS MSD MS MSD MS 92323208006 Spike Spike MSD % Rec Max % Rec RPD Parameter Units Result Conc. Conc. Result Result % Rec Limits RPD Qual Total Organic Carbon 0.67J 25 25 24.1 24.2 94 94 90-110 0 10 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

QC Batch: 341707 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC

Associated Lab Samples: 92322876001

METHOD BLANK: 1895789 Matrix: Water

Associated Lab Samples: 92322876001

ParameterUnitsBlank ResultReporting LimitMDLAnalyzedQualifiersTotal Organic Carbonmg/LND1.00.5012/20/16 13:05

LABORATORY CONTROL SAMPLE: 1895790

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Total Organic Carbon mg/L 25 23.5 94 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1895791 1895792

MS MSD

92322292003 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual **Total Organic Carbon** mg/L 3.8 25 25 27.4 27.8 94 96 90-110 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1895793 1895794

MS MSD MS MSD MS 92323216002 Spike Spike MSD % Rec Max % Rec RPD Parameter Units Result Conc. Conc. Result Result % Rec Limits RPD Qual Total Organic Carbon 1.5 25 25 25.1 25.4 94 96 90-110 10 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Huntersville, NC 28078 (704)875-9092



QUALIFIERS

Project: BELEWS J16090796

Pace Project No.: 92322876

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-M	Pace Analytical Services - Minneapolis
PASI-O	Pace Analytical Services - Ormond Beach
PASI-W	Pace Analytical Services - Greenwood

ANALYTE QUALIFIERS

Date: 01/11/2017 02:35 PM

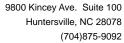
B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BELEWS J16090796

Pace Project No.: 92322876

Date: 01/11/2017 02:35 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	RSK 175 RSK 175	453165 453165		
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	EPA 300.0 EPA 300.0	340766 340766		
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	EPA 200.7 EPA 200.7	340496 340496	EPA 200.7 EPA 200.7	340731 340731
92322876001	NORTH OF S-10+11	EPA 200.7	340915	EPA 200.7	341058
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	EPA 200.7 EPA 200.7	341069 341069		
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	EPA 200.8 Rev 5.4 EPA 200.8 Rev 5.4	340490 340490	EPA 200.8 Rev 5.4 EPA 200.8 Rev 5.4	340705 340705
92322876001	NORTH OF S-10+11	EPA 200.8 Rev 5.4	340493	EPA 200.8 Rev 5.4	340712
92322876001 92322876002 92322876003 92322876004	NORTH OF S-10+11 EB-JJZ-1 NORTH OF S-10 + 11 BLANK EB-JJZ-1 BLANK	EPA 1631E EPA 1631E EPA 1631E EPA 1631E	340763 340763 340763 340763	EPA 1631E EPA 1631E EPA 1631E EPA 1631E	340765 340765 340765 340765
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	SM 2320B SM 2320B	340547 340547		
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	SM 2540C SM 2540C	340794 340794		
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	SM 2540D SM 2540D	340920 340920		
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	SM 4500-S2D SM 4500-S2D	340775 340775		
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	EPA 218.7 EPA 218.7	339808 339808		
92322876001 92322876002	NORTH OF S-10+11 EB-JJZ-1	EPA 353.2 EPA 353.2	341583 341583		
92322876001	NORTH OF S-10+11	SM 5310B	341707		
92322876002	EB-JJZ-1	SM 5310B	341404		

REPORT OF LABORATORY ANALYSIS

		e Condition	Linon R	eceipt(S(CUR)	7.	Page 1 01 2	
Pace Analytical®	Sample	Docu	ment No				Issuing Authority Pace Quality Offic	e
boratory receiving samples:	en Greer	F-CAR-C	S-033-Re		ersvil		Raleigh	Mechanicsville
Sample Condition Upon Receipt Courier: Courier:	ame:	□USPS □ Other			Proje Client	92322	‡ : 9232 	
Custody Seal Present?	No Seals I	ntact?	□Yes			Date/Ir	nitials Person Exam	ining Contents: BV 12/12
Packing Material: Bubble Thermometer: The Gun ID: Cooler T	Semp Corrected (°C):	Type of	□Non		∏Othe	□None Biological Tiss	Samples or sue Frozen?	nice, cooling process has begu Yes No N/A
Temp should be above freezing to 6°C USDA Regulated Soil (N/A, water) Did samples originate in a quarantine zo Yes No	, sample) one within the United	States: CA,	NY, or SC	C (check m	iaps)?	including Hav	originate from a fore waii and Puerto Ricc omments/Discrep	eign source (internationally, o)? □Yes □에o ancy:
		Æ Yes	□No	□N/A	1.			
Chain of Custody Present?		Yes	□No	□N/A	2.			
Samples Arrived within Hold Time?		₩es	□No	□n/a	3.			
Short Hold Time Analysis (<72 hr.)?		□Yes		□N/A	4.	1 1		
Rush Turn Around Time Requested?		Yes	□No	□n/A	5.			
Sufficient Volume?			□No	□N/A	6.			
Correct Containers Used?		Yes		□N/A	5.057	(*).		
-Pace Containers Used?		Yes	74 1000	□N/A	7.	1 4		
Containers Intact?		Yes	□No	□N/A	8.	Note if sedimer	nt is visible in the c	lissolved container
Samples Field Filtered?	1 -	□Yes	<u> </u>					W 0.8
Sample Labels Match COC?	NT	→ E Xes	□No				14	
-Includes Date/Time/ID/Analysis	Matrix:		-C		10.			
Headspace in VOA Vials (>5-6mm)?		□Yes				* to		
Trip Blank Present?		□Yes	_/	00 <u></u>		water		Dv DMa
Trip Blank Custody Seals Present?	-2.2 Conseq.00	☐Yes	ZINO				Field Da	ta Required? Yes No
CLIENT NOTIFICAT	TION/RESOLUTION					Date/Time:	. 3	
Person Contacted: Comments/Sample Discrepancy:								
						Da	te: 12/12/	16
Project Manager SCURF Re	view:					- 13	te: 12/12/	116
Project Manager SRF Revie	ew: <i>W</i>	8				14.	No.	

Document Name:

Document Revised: Sept. 21, 2016

Page 1 of 2

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)



Document Name:

Sample Condition Upon Receipt(SCUR)

Document No.: F-CAR-CS-033-Rev.01

Document Revised: Sept. 21, 2016 Page 2 of 2

Issuing Authority: Pace Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

**Bottom half of box is to list number of bottles

Project #

WO#: 92322876

PM: KLH1

Due Date: 12/19/16

CLIENT: 92-Duke Ener

	T	T			T			Т-	т			т			_									,				
#wa#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S- 250 mL Plastic H2SO4 (pH < 2) (CI-)	BP3N- 250 mL plastic HNO3 (pH < 2)	BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)	BP3C- 250 mL Plastic NaOH (pH > 12) (CI-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (CI-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCI (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	2/03	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1		120	1	1	1	4	1									3			3					3	/			
2	7/	112				/						A												$\langle \ \ $				
3	X.	DZ.	(1		2	X					S				3			7					3	1			
4												7)			1	_					
5	/											9	7	7									\rightarrow		1	-	-	
6							1						1	1	1						-		_	1	1	-		
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9				\rightarrow	1	1	1	1				\rightarrow	$\overline{}$	$\overline{}$	1		+							\downarrow	X	4	_	_
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11			-	\rightarrow	$\langle \cdot \rangle$	\downarrow	\forall	\forall	-				\downarrow	\downarrow	1										\bigvee			
12				_	X	X	1	4	+		1		1	\downarrow	1									1	1			
																								1				

pH Adjustment Log for Preserved Samples											
Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot#					
				1 3 1 2							
				11							
				a 75							

1	By By	13 14 15 16 17 18	7 8 8 9 10 11 12	3 F8 -57 4 E8 -077 6	ple	Duke Energy Analytical Laboratory Chain of Custody & Sample Log EPROPERTNAMES CSA AB GROWN Business Unit: Waterbody: Waterbody: Duke Energy Chain of Custody & Sample Log Chain of Custody & Sample Log Waterbody: Waterbody: Duke Energy Analytical Laboratory Chain of Custody C
Accepted By: Date/Time Date/Time Sealed/Lock Opened By ELEMENTS by ICP_MS (TRM): As, Be, Cd, Co, Cr, Cu, Mo, Ni, Pb, Sb, Se, Tl (LL), V (LL) Dissolved metals: all metals ICP, IMS, Hg	(E71)			-072-1 131.4WK	Sample Description or ID	Duke Energy Analytical Laboratory aboratory aboratory aboratory stody & Huntersille, N.C. 2078 (Poly 875-5032) CSA AB GW Assessment water France No: Places: Place No: Places: MG03A3 Process: Resp. Center Te: Mail Code: MG03A3 Sadon: P. ELED
Accepted By: Sealed/Lock Opened By Ju, Mo, Ni, Pb, Sb, Se, TI (LICP_Undigested Ca	Accepted By:				Customer to complete all appropriate non shaded areas. Collection information Date Time Signature	
Date/Time Date/Time	Dato/Time			232	Comp.	OF CUSTODY RECORD AND ANALYSIS REQUEST Analytical Laboratory Use Only. Order # Matrix GW_WW Samples Originating From Sequence Originating From Sequence Originating From Sequence Originating From Sequence Originating Water Post Sequence Originating Water Post Sequence Originating Water Post Sequence Originating From Se
Time	16 0			1-1-	TSS	Analytical Laboratory Use Only. Matrix GW_WW Samples Only. Samples Only. Simples Only. Samples Only. Simples Only. Samples Only. Simples Only. Simp
	3			1 7 1 93	CI, SO4	SREQUEST FORM
Customer, important: pleas desired turnaround	e indicate			1,11	Sulfide	
7 Days *48 Hr ASAP Add. Cost Will Apply	Requested Turnaround			, - , -	Nitrate-Nitrite Hex Chrom 218.7	ORIGINA ORIGINA Glass Per Propinsis (ce) Add Hyso, man.
PPIV	around				Radium 226 Radium 228 LL Hg Metals (see below)	Table 1 of AB, COPY AB, COPY AFE
	<u>a</u>			5	Dissolved Metals A	75 CLIENT Page 54 of 54